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NINETY-THIRD

ANNUAL CATALOGUE

OF THE

MEDICAL SCHOOL

(BOSTON)

OF

HARVARD UNIVERSITY.

1875-76.

*[Reprinted from the Catalogue of the University.]*



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*Press of John Wilson & Son.*



# MEDICAL SCHOOL.

BOSTON.

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**THE** plan of study in this school was radically changed in 1871. Instruction is given by lectures, recitations, clinical teaching, and practical exercises uniformly distributed throughout the academic year. The year begins on the Thursday following the last Wednesday in September, and ends on the last Wednesday in June. It is divided into two equal terms, with a recess of one week between them. There is also a recess of one week at Christmas. The second term begins Monday, February 14, 1876. Either of these two terms is more than equivalent to the former "Winter Session," as regards the amount and character of the instruction.

The course of instruction has been greatly enlarged, so as to extend over three years, and has been so arranged as to carry the student progressively and systematically from one subject to another in a just and natural order.

In the subjects of anatomy, histology, chemistry, and pathological anatomy, laboratory work is substituted for, or added to, the usual didactic lectures, and is as much required of every student as attendance at lectures and recitations.

Instead of the customary oral examination for the degree of Doctor of Medicine, held at the end of the three years' period of study, a series of written examinations on all the main subjects of medical instruction has been distributed for regular students through the whole three years. Every candidate for the degree must pass a satisfactory examination in every one of the principal departments of medical instruction at some time during his period of study. In, and after September, 1877, an examination on entrance will be required.

Members of any one department of Harvard University have a right to attend lectures and recitations in any other department without paying additional fees. Students in the Medical School, who wish to avail themselves of this opportunity of pursuing scientific or other studies, may do so without loss of time counted as medical study, to such extent and in such manner as the Medical Faculty shall in each case prescribe. Undergraduates intending to study medicine are advised to pay special attention to the study of Natural History, Chemistry, Physics, and the French and German languages, while in college.

## FACULTY.

- CHARLES W. ELIOT, LL.D., *President.*  
 CALVIN ELLIS, M.D., *Dean, and Jackson Professor of Clinical Medicine.*  
 JOHN B. S. JACKSON, M.D., *Shattuck Professor of Morbid Anatomy,  
 and Curator of the Anatomical Museum.*  
 OLIVER W. HOLMES, M.D., *Parkman Professor of Anatomy.*  
 HENRY J. BIGELOW, M.D., *Professor of Surgery.*  
 JOHN E. TYLER, M.D., *Professor of Mental Diseases.*  
 CHARLES E. BUCKINGHAM, M.D., *Professor of Obstetrics and  
 Medical Jurisprudence.*  
 FRANCIS MINOT, M.D., *Hersey Professor of the Theory and Practice of  
 Physic.*  
 JOHN P. REYNOLDS, M.D., *Instructor in Obstetrics.*  
 HENRY W. WILLIAMS, M.D., *Professor of Ophthalmology.*  
 DAVID W. CHEEVER, M.D., *Professor of Clinical Surgery.*  
 JAMES C. WHITE, M.D., *Professor of Dermatology.*  
 ROBERT T. EDES, M.D., *Professor of Materia Medica.*  
 HENRY P. BOWDITCH, M.D., *Assistant Professor of Physiology.*  
 FREDERICK I. KNIGHT, M.D., *Instructor in Percussion, Auscultation,  
 and Laryngoscopy.*  
 CHARLES B. PORTER, M.D., *Demonstrator of Anatomy and Instructor  
 in Surgery.*  
 JOHN C. WARREN, M.D., *Instructor in Surgery.*  
 REGINALD H. FITZ, M.D., *Assistant Professor of Pathological Anatomy.*  
 WILLIAM L. RICHARDSON, M.D., *Instructor in Clinical Midwifery.*  
 THOMAS DWIGHT, JR., M.D., *Instructor in Histology.*  
 EDWARD S. WOOD, M.D., *Assistant Professor of Chemistry.*  
 HENRY H. A. BEACH, M.D., *Assistant Demonstrator of Anatomy.*  
 WILLIAM B. HILLS, M.D., *Instructor in Chemistry.*

## OTHER INSTRUCTORS.

- GEORGE F. H. MARKOE, *Instructor in Materia Medica.*  
 FRANK W. DRAPER, M.D., *Lecturer on Hygiene.*

The following gentlemen will give special clinical instruction:—

- FRANCIS B. GREENOUGH, M.D., and EDWARD WIGGLES-  
 WORTH, JR., M.D., *in Syphilis.*  
 JOHN O. GREEN, M.D., and C. J. BLAKE, M.D., *in Otology.*  
 JAMES R. CHADWICK, M.D., and WILLIAM H. BAKER, M.D.,  
*in Diseases of Women.*  
 CHARLES P. PUTNAM, M.D., and JOSEPH P. OLIVER, M.D.,  
*in Diseases of Children.*  
 SAMUEL G. WEBBER, M.D., and JAMES J. PUTNAM, M.D.,  
*in Diseases of the Nervous System.*

STUDENTS.

COURSE FOR GRADUATES.

NAME.	RESIDENCE.
Biggs, Frederick Pfeiffer, M.D.,	<i>Valparaiso, Chili.</i>
Fletcher, Samuel William, M.D.,	<i>Pepperell.</i>
Keene, Joseph Wadsworth, M.D.,	<i>Bremen, Me.</i>
Ott, Isaac, M.D.,	<i>Philadelphia, Pa.</i>

REGULAR STUDENTS.

Third Class.

Bell, Read Letts, A.B. ( <i>Dennison Univ., Ohio</i> ),	<i>Granville, O.</i>
Bell, William Appleton, A.B.,	<i>Somerville.</i>
Bogman, Edward Young, A.B. ( <i>Brown Univ.</i> ),	<i>Brookline.</i>
Bridgham, Jairus Greenwood,	<i>Woburn.</i>
Brown, John Coffin Jones, A.B.,	<i>Boston.</i>
Carolin, William Terence,	<i>Lowell.</i>
Cooper, Charles Wendell, A.B. ( <i>Amherst Coll.</i> ),	<i>Amherst.</i>
Copeland, Frederic Herbert, A.B.,	<i>Stoneham.</i>
Cunningham, Thomas Edward,	<i>Charlottetown, P. E. I.</i>
Cutter, Charles Kimball, A.B. ( <i>Tufts Coll.</i> ),	<i>Somerville.</i>
Cutter, John Clarence, B.S. ( <i>Mass. Agric. Coll.</i> ),	<i>Warren.</i>
Everett, Oliver Hurd, A.B.,	<i>Cambridge.</i>
Fogg, Irving Sylvester,	<i>Norwood.</i>
Fogg, William John Gordon, A.B.,	<i>Boston.</i>
Foley, John Bernard,	<i>Boston.</i>
Forsyth, Frank Lyman,	<i>Weymouth.</i>
Gore, John Flint,	<i>Boston.</i>
Haven, Henry Cecil, A.B. ( <i>Amherst Coll.</i> ),	<i>New London, Conn.</i>
Hooper, Frank Henry,	<i>Boston.</i>
Howe, Octavius Thorndike, A.B.,	<i>Cambridge.</i>
Hutchinson, Marcello, A.B.,	<i>Wakefield.</i>
Lamb, Frederic Dan,	<i>Lawrence.</i>
Lindsey, Joseph Ferdinand, A.B. ( <i>Brown Univ.</i> ),	<i>Fall River.</i>
Livingston, Alexander,	<i>Buenos Ayres.</i>
Lopez, Rafael,	<i>Boston.</i>
Lyman, John Chester,	<i>Northampton.</i>
Marion, Otis Humphrey, A.B. ( <i>Dart. Coll.</i> ),	<i>Brighton.</i>
Marston, Enoch Quimby,	<i>Lowell.</i>
McGrath, Eugene John,	<i>Boston.</i>
McMonagle, Beverly,	<i>Sussex, N. B.</i>
Miller, Charles John,	<i>Pictou, N. S.</i>
Miller, Ernest Parker, A.B.,	<i>Fitchburg.</i>

Miller, Winthrop, A.B.,  
 Otis, Edward Osgood, A.B.,  
 Place, Charles Ashton,  
 Read, Robert McLellan,  
 Richardson, Maurice Howe, A.B.,  
 Robertson, William Duncan,  
 Sheldon, Chauncey Cooley, A.B.,  
 Spalding, Charles Parker, A.B.,  
 Tilden, Frank Elmer,  
 Webber, Frank Orlando,  
 Wheaton, Charles Augustus,

*Boston.*  
*Cambridge.*  
*E. Walpole.*  
*Boston.*  
*Fitchburg.*  
*Stanstead, Canada.*  
*Boston.*  
*Lowell.*  
*N. Easton.*  
*Cambridge.*  
*Northfield, Minn.*

### Second Class.

Avery, Alonzo Moffitt,  
 Ballou, Charles Olney,  
 Bancroft, Charles Parker, A.B.,  
 Bancroft, Winfred Baxter, A.B. (*Amherst Coll.*),  
 Brannan, John Winters, A.B.,  
 Clark, Charles Edward, A.B. (*Bowd. Coll.*),  
 Cummings, Edwin Francis,  
 Deming, William Nelson,  
 Dwight, James, A.B.,  
 Elliot, John Wheelock, A.B.,  
 Fairbanks, Charles Albert, B.S. (*Dart. Coll.*),  
 Farlow, John Woodford, A.B.,  
 Fitz, Samuel Eaton, A.B.,  
 Flanders, Frank Byron, A.B.,  
 Foster, Charles,  
 Foster, James Richards,  
 French, Samuel William, A.B.,  
 Galvin, George William,  
 Gannett, William Whitworth, Jr., A.B.,  
 Gould, Lawrence Mirvin,  
 Green, Charles Montraville, A.B.,  
 Greenwood, Sewell Elliott,  
 Hamilton, Albinus Otis,  
 Harrington, John Richard,  
 Holbrook, Uriah Hopkins, A.B. (*Brown Univ.*),  
 Howard, Arthur Chadwick,  
 Hunt, William Otis,  
 Hunt, Willis Henry,  
 Johnson, John Waldo,  
 Kelley, George Wallace,  
 Kilby, Henry Sherman, A.B.,

*Galena, Ill.*  
*Providence, R. I.*  
*Concord, N. H.*  
*Boston.*  
*Cincinnati, O.*  
*Boston.*  
*Taunton.*  
*Providence, R. I.*  
*Boston.*  
*Keene, N. H.*  
*Dover, N. H.*  
*Newton.*  
*Boston.*  
*Lawrence.*  
*Boston.*  
*N. Attleboro'.*  
*Boston.*  
*Boston.*  
*Cambridge.*  
*Boston.*  
*Medford.*  
*Hubbardston.*  
*Newton.*  
*Cranston, R. I.*  
*Providence, R. I.*  
*Boston.*  
*Newtonville.*  
*Providence, R. I.*  
*Framingham.*  
*Boston.*  
*Boston.*

Leland, George Adams, A.B. ( <i>Amherst Coll.</i> ),	<i>Boston.</i>
Mason, William Castein, A.B.,	<i>Bangor, Me.</i>
Mathewson, Charles Brenton, A.B. ( <i>Brown Univ.</i> ),	<i>E. Greenwich, R. I.</i>
Mills, George Westgate, B.S. ( <i>Agric., Amherst</i> ),	<i>Medford.</i>
Minot, James Jackson, A.B.,	<i>Boston.</i>
Morse, Henry Lee, A.B.,	<i>Boston.</i>
Moseley, William Oxnard, A.B.,	<i>Boston.</i>
Peters, Edward Dyer, Jr.,	<i>Boston.</i>
Shaw, Thomas Pierpont, A.M., LL.B.,	<i>Lowell.</i>
Shepardson, Oscar Jerome,	<i>Chester.</i>
Smith, Frederick Arnold,	<i>Springfield.</i>
Smith, George Edward,	<i>Zanesville, O.</i>
Souther, William Towle, A.B. ( <i>Yale Coll.</i> ),	<i>Worcester.</i>
Stackpole, Frederick Dabney, A.B.,	<i>Boston.</i>
Swift, John Baker, A.B. ( <i>Amherst Coll.</i> ),	<i>Brooklyn, N. Y.</i>
Tuttle, George Thomas, A.B. ( <i>Dart. Coll.</i> ),	<i>Lynn.</i>
Walker, Charles Rumford, A.B. ( <i>Yale Coll.</i> ),	<i>Concord, N. H.</i>
Walton, Alfred,	<i>Boston.</i>
Weiss, Henry Ware,	<i>Boston.</i>
White, Luther Robinson, A.B. ( <i>Bates Coll.</i> ),	<i>Lewiston, Me.</i>
Whittemore, Fred Webster,	<i>Cambridge.</i>
Williams, Francis Henry, B.S. ( <i>Mass. Inst. Tech.</i> ),	<i>Boston.</i>
Woodward, Samuel Bayard, A.B.,	<i>Worcester.</i>
Wyman, Samuel Edwin, A.B.,	<i>Arlington.</i>

**First Class.**

Abeles, Edward,	<i>Leavenworth, Kans.</i>
Alger, William Ellerton,	<i>Boston.</i>
Allen, Charles Warrenne,	<i>Flemington, N. J.</i>
Ambrose, George Booth,	<i>Chelsea.</i>
Bacon, Jonas Edward, A.B.,	<i>Woburn.</i>
Bennett, Luther William,	<i>Boston.</i>
Berry, John James,	<i>Exeter, N. H.</i>
Bickford, George Coburn,	<i>Charlestown.</i>
Blaisdell, Albert Franklin, A.B. ( <i>Dart. Coll.</i> ),	<i>Haverhill.</i>
Bowditch, Vincent Yardley, A.B.,	<i>Boston.</i>
Broughton, Henry White, A.B.,	<i>Jamaica Plain.</i>
Brown, Page,	<i>San Francisco, Cal.</i>
Bullard, William Norton, A.B.,	<i>Boston.</i>
Burns, Robert,	<i>Lancaster, N. H.</i>
Burrell, Herbert Leslie,	<i>Boston.</i>
Carvelle, Henry de Wolfe,	<i>Boston.</i>
Chisholm, Adam Stuart Muir,	<i>Newtonville.</i>



Cobb, Charles Henry,	<i>Boston.</i>
Comey, Perley Pierce,	<i>Worcester.</i>
Cosgrave, John Joseph,	<i>Peabody.</i>
Curley, John Patrick,	<i>Boston.</i>
Donovan, Samuel Magner,	<i>Boston.</i>
Dorcey, James Edmund,	<i>Boston.</i>
Dougherty, James Joseph,	<i>Lewell.</i>
Ellis, Edward Dyer, A.B. ( <i>Middlebury Coll.</i> ),	<i>Fairhaven, Vt.</i>
Emerson, William Carroll, A. B.,	<i>Haverhill.</i>
Faden, Andrew Clarence,	<i>Woburn.</i>
Ferris, Edward Mortimer, A.B.,	<i>Brookline.</i>
Fessenden, George Russell, A.B.,	<i>Beaver Falls, Pa.</i>
Field, Charles Elmer, A.B. ( <i>Brown Univ.</i> ),	<i>Brockton.</i>
Fraser, Donald Allan,	<i>Boston.</i>
Fuller, Frank Boutelle, A.B. ( <i>Bates Coll.</i> ),	<i>Wilton, Me.</i>
Garceau, Alexander Emanuel,	<i>Boston.</i>
Geary, John Chapman,	<i>Boston.</i>
Goddard, Thatcher,	<i>Boston.</i>
Gregg, John Argeloe,	<i>Somerville.</i>
Haddock, Charles Whitney,	<i>Beverly.</i>
Ham, Otis French,	<i>Belmont.</i>
Harwood, Charles William,	<i>Worcester.</i>
Hayward, George Griswold,	<i>Milton.</i>
Heath, Alfred Brown,	<i>Boston.</i>
Hun, Henry, PH.B. ( <i>Sheffield Scientific School</i> ),	<i>Albany, N.Y.</i>
Johnson, William Louis,	<i>Cambridge.</i>
Keating, Patrick Francis Houghton,	<i>Charlestown.</i>
Keene, George Frederick, A.B. ( <i>Brown Univ.</i> ),	<i>Providence, R. I.</i>
Kelly, William Philip,	<i>Boston.</i>
Lewis, William Jerauld,	<i>Hartford, Conn.</i>
Libbey, Ina Elmore,	<i>Nashua, N. H.</i>
McCarty, James Joseph,	<i>Lowell.</i>
McEttrick, John Finan,	<i>Boston.</i>
Morgan, Francis Butchelder,	<i>Providence, R. I.</i>
Moses, Theodore William, A.B.,	<i>Exeter, N. H.</i>
Mudge, Henry Sanford,	<i>Boston.</i>
Nash, Willard George,	<i>Columbia, Me.</i>
Noyes, Charles Henry,	<i>Gardner.</i>
Owen, John,	<i>Newark, Ohio.</i>
Palmer, Theodore Dwight,	<i>Stonington, Conn.</i>
Peavey, George Arthur,	<i>Moultonboro', N. H.</i>
Penteado, José Bonifacio Leite,	<i>San Paulo, Brazil.</i>
Perkins, Thomas Lyman,	<i>Salem.</i>
Perry, Eben Greeley,	<i>Boston.</i>

Phipps, Walter Andrus,  
 Plimpton, Lewis Henry, A.B.,  
 Pray, John Wheeler,  
 Price, Russel Clarence,  
 Prince, Morton Henry, A.B.,  
 Reggio, André Carney,  
 Rix, Frank Reader, A.B.,  
 Sawyer, William Brewster, A.B. (*Amherst Coll.*),  
 Scoboria, Charles Quantie,  
 Seymour, William Wotkyns, A.B. (*Yale Coll.*)  
 Smith, Jonathan Jason,  
 Smith, Sheffield, Jr.,  
 Standish, Myles, A.B. (*Bowd. Coll.*),  
 Stockwell, Charles Bliss, A.B. (*Olivet Coll.*),  
 Trouvelot, George Hypolite Etienne,  
 Tsuchiga, Seiken,  
 Tufts, George Blanchard,  
 Viles, Clarence Albertus,  
 Warren, Franklin Cooley, Jr.,  
 Watson, Francis Sedgewick, A.B.,  
 Webber, Frederick Ward,  
 West, George Webb, A.B.,  
 Wheeler, John Brooks, A.B. (*Univ. of Vt.*),  
 Whiting, Augustus Horton,  
 Wight, Andrew Mun,  
 Williams, Harold,  
 Woodman, Walter, A.B.,  
 Woodward, Josiah Nichols,  
 Yenetchi, Henry Ainsworth,

*Hopkinton.*  
*Walpole.*  
*Dover, N. H.*  
*Waukegan, Ill.*  
*Boston.*  
*Boston.*  
*Lowell.*  
*Easthampton.*  
*N. Somerville.*  
*Troy, N. Y.*  
*Somerville.*  
*N. Providence, R. I.*  
*Boston.*  
*Port Huron, Mich.*  
*Cambridge.*  
*Japan.*  
*Dover, N. H.*  
*Lowell.*  
*Boston.*  
*Milton.*  
*Cambridge.*  
*Salem.*  
*Burlington, Vt.*  
*Andover.*  
*Springfield.*  
*Brookline.*  
*Cambridge.*  
*Pepperell.*  
*Charlestown.*

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### SUMMARY.

GRADUATES . . . . .	4
THIRD CLASS . . . . .	43
SECOND CLASS . . . . .	55
FIRST CLASS . . . . .	90
Total . . . . .	<u>192</u>

## REQUISITES FOR ADMISSION.

In and after September, 1877, all students seeking admission to the Medical School must present a degree in Letters or Science from a recognized college or scientific school, or pass an examination in the following subjects:—

1. **LATIN.** The translation of easy Latin prose. French or German will be accepted, however, as a substitute for Latin.

2. **PHYSICS.** Candidates will be required to show such a knowledge of this subject as may be obtained from Balfour Stewart's elementary works on Physics.

The examinations will be conducted in writing, and in judging the work of the candidates the spelling, grammar, and construction will be considered.

Graduates in medicine will not be required to pass this examination on joining the school.

## DIVISION OF STUDIES.

*First year.*—Anatomy, Physiology, and General Chemistry.\*

*Second year.*—Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, and Clinical Surgery.

*Third year.*—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

## COURSE OF INSTRUCTION.

The following methods of instruction are adopted in the several departments:—

*Anatomy.*—Lectures; various practical exercises, including abundant dissection under the direction of the Demonstrator; recitations from text-books; histology.

*Physiology.*—Lectures, recitations, and practical demonstrations in the laboratory. To students of the third class opportunities are given for original investigations in the laboratory.

*Chemistry* is taught mainly by practical work in the laboratory, the student having his own desk and apparatus. General Chemistry and qualitative analysis are taught during the first year. Besides the laboratory work, there is a lecture and a recitation every week. In the second year, medical chemistry is taught by lectures and laboratory work.

*Pathological Anatomy* is taught by lectures, recitations, and practical instruction in pathological histology. The collection of the Warren Anatomical Museum is used to illustrate the lectures, and many morbid

\* Any student who shall have previously passed in the Undergraduate Department or Scientific School of Harvard University an examination in General Chemistry (including qualitative analysis) will be exempt from examination in this branch, and may pursue the study of Medical Chemistry during his first year



specimens are shown in a fresh state. Students also receive practical instruction in the method of making autopsies, to which they are admitted at both hospitals. Special classes in pathological histology, including the diagnosis of tumors, are formed for those who are provided with a microscope. Such students are required to prepare the various objects. The school possesses a number of microscopes for the use of those students whose means will not permit the purchase of an instrument.

*Materia Medica and Therapeutics.* — *Materia Medica* is taught by lectures and practical demonstrations. *Therapeutics*, or the physiological action of drugs and their application to disease, is taught in the third year by lectures.

*The Theory and Practice of Medicine.* — Lectures, recitations, and hospital visits.

*Clinical Medicine.* — Daily instruction is given in this department by hospital visits and other exercises. Students are furnished with cases for personal examination, and are called upon to report them before the class, where they are criticised. These examinations are held both in the wards and in the amphitheatre. Another exercise, known as the "Clinical Conference," affords an opportunity for more thorough preparation of cases, more time being allowed for their study. The full written report of a case is read by the student who has examined it. It is afterwards criticised by the class, by the Professor of Clinical Medicine, and other teachers in the school. In addition to this, a regular course of supplementary instruction is given in Auscultation and Percussion, and in Laryngoscopy, which affords students an abundant opportunity for acquiring a thoroughly practical knowledge of these methods of exploration.

*Surgery.* — Lectures and recitations. There are also courses on Surgical Anatomy, Minor Surgery, Surgical Histology, Bandaging, and Operative Surgery. In the latter, students of the third class are supplied with material for repeating the usual surgical operations.

Instruction in Clinical Surgery is given at the Massachusetts General Hospital and City Hospital throughout the year as follows : —

FIRST TERM. — Clinical Lectures on cases, per week, 2; Surgical Visits in the hospital wards, per week, 3; public operating days, per week, 2. Per week, 7.

SECOND TERM. — Clinical Lectures on cases, per week, 1; Surgical Visits in the hospital wards, per week, 3; public operating days, per week, 3. Per week, 7.

The Professor of Clinical Surgery holds an exercise twice a week, in winter, at the City Hospital.

Clinical Surgery is there taught, in two ways : 1st, by bedside examinations of the students in the hospital wards ; 2d, by a surgical conference, at which the advanced students make a full report of a surgical case in writing, which is then criticised by their fellow-students, and by

the Professor. The case is completed, whenever practicable, by an exhibition of, or operation on, the patient, — on the spot.

*Obstetrics.* — Lectures and recitations. Students are instructed in the usual operations on the manikin, and will have opportunities to take charge of cases of midwifery in their third year. A course of operative midwifery, with practical illustrations on the cadaver, is given.

*Diseases of Women and Children.* — Lectures and Clinical Instruction.

*Mental Diseases.* — Lectures.

*Ophthalmology.* — A complete course is delivered upon the diseases of the eye, including clinical instruction and the use of the ophthalmoscope.

*Dermatology* is taught by lectures and clinical illustrations. The large number of out-patients at the Massachusetts General Hospital furnishes ample opportunities for illustration.

*Syphilis.* — Recitations and clinical instruction.

*Otology.* — Lectures and clinical instruction.

*Laryngoscopy, Auscultation, and Percussion.* — Lectures and Demonstrations.

*Diseases of the Nervous System.* — Lectures and Demonstrations.

*Hygiene.* — Lectures.

### TEXT-BOOKS.

The following works are recommended as text-books and for collateral reading: —

#### *Text Books.*

#### *Collateral Reading.*

#### ANATOMY.

Gray, Wilson, Leidy.

Hodges's Practical Dissections.

Holden's Manual.

Quain (Edition of 1867).

Holden's Osteology.

Stricker's Manual of Histology.

Frey's Microscopic Technology.

Tyson's Cell Doctrine.

#### PHYSIOLOGY.

Dalton's Human Physiology.

Carpenter's Principles of Human Physiology.

Kirke's Handbook of Physiology.

Huxley's Elementary Lessons in Physiology.

Pavy on Food and Dietetics.

Hermann, Grundriss der Physiologie der Menschen.

Fick, Compendium der Physiologie.

Fick, Medicinische Physik.

Sanderson's Hand-book for the Physiological Laboratory.

Flint's Physiology of Man.

#### GENERAL CHEMISTRY.

Roscoe's Elementary Chemistry.

Galloway's Qualitative Analysis.

Miller's Elements of Chemistry.

MEDICAL CHEMISTRY.

Harley on Urine.	Ralfe, Outlines of Physiological Chemistry.
Reese's Manual of Toxicology.	Gorup-Besanez, Physiologische Chemie.
	Neubauer und Vogel, Analyse des Harns.
	Taylor, on Poisons.
	Tardieu, Étude médico-légale et clinique sur l'Empoisonnement.

MATERIA MEDICA.

Parrish's Pharmacy.	United States Dispensatory.
United States Pharmacopœia.	

PATHOLOGICAL ANATOMY.

Virchow's Cellular Pathology.	Wilks's Pathological Anatomy (Moxon's edition).
Jones and Sieveking's Pathological Anatomy (Payne's edition).	Rindfleisch's Pathological Histology.
	Delafield's Post-Mortem Examinations.

THERAPEUTICS.

H. C. Wood's Therapeutics.	Ringer's Therapeutics.
Stillé's Therapeutics and Materia Medica.	Nothnagel, Arzneimittellehre.

OBSTETRICS.

Leishman's System of Midwifery.	Cazeaux's Midwifery.
Schroeder's Manual of Midwifery.	

THEORY AND PRACTICE.

Flint's Practice of Medicine.	Reynolds's System of Medicine.
Da Costa's Medical Diagnosis.	Aitken's Science and Practice.

SURGERY.

Bryant's Practice of Surgery.	Heath's Minor Surgery and Bandaging.
Billroth's Surgical Pathology.	Bellamy on Surgical Anatomy.
	Guérin, Éléments de Chirurgie Opératoire.
	Holme's System of Surgery.
	Cooper's Surgical Dictionary (1872).

The tabular views on the following pages will illustrate the distribution of studies throughout the year:—

## FIRST TERM, 1875-76.

## FIRST YEAR.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Histology.	Laboratory.	Laboratory.	Histology.	Laboratory.	Laboratory.
10	Histology.	Laboratory.	Laboratory.	Histology.	Chemistry. R.	Physiology. R.
11	Physiology. L.	Physiology. L.	Chemistry. L.	Laboratory.	Physiology. L.	
12	Laboratory.	Laboratory.	Laboratory.	Laboratory.	Laboratory.	Museum.
1	Last 11 w'ks, Anatomy. L.	Anatomy. L.	Anat. R. 1st 8 weeks. Anat. L. last 11 weeks.	Anatomy. L.	Anatomy. R.	
5	Prac. Anat. After Jan. 1.	Prac. Anat. After Jan. 1.	Prac. Anat. After Jan. 1.	Prac. Anat. After Jan. 1.	Prac. Anat. After Jan. 1.	

## SECOND YEAR.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	M. G. H. Med. Visits.	B. C. H. Med. Visit. Bost. Disp.	Clin. Med. L.	M. G. H. Med. Visit.	Boston Dispensary.	Chemistry. R.
10	Aus. & Per.	Clin Surg. L After Dec. 1. Aus. & Per.	Aus. & Per.	Aus. & Per.	B. C. H. Surg. Visit. Aus. & Per.	M. G. H. Surg. Visit. Aus. & Per.
11	Clin. Surg. L.			Materia Medica.	B. C. H. Op.	M. G. H. Op.
12	Path. Anat. L.	Chemistry. L.		Materia Medica.		Museum.
3	Path. Microscopy.	Path Anat. R.	Path. Anat. L.	Path. Microscopy.	Path. Anat. R.	
4			Surgery. R.	Clin. Con.		
5	Prac. Anat. Till Jan. 1.	Prac. Anat. Till Jan. 1.	Prac. Anat. Till Jan. 1.	Prac. Anat. Till Jan. 1.	Prac. Anat. Till Jan. 1.	

**THIRD YEAR.**

I	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	M. G. H. Med. Visit. Eye and Ear Infirmary.	B. C. H. Med. Visit. Bost. Disp.	Clinical Medicine. L.	M. G. H. Med. Visit. Eye and Ear Infirmary.	B. C. H. Ophthal. and Otology. Bost. Disp.	Diseases of Nervous Sys.
10	Theo. and Prac. L.	Clin. Surg. L. After Dec. 1.	Dermatol. Clinical.	Theo. and Prac. L.	B. C. H. Surg. Visit.	M. G. H. Surg. Visit.
11	Clin. Surg. L.		Surgery. L.	Surgery. L.	B. C. H. Op. Diseases of Children.	M. G. H. Op.
12	Obstetrics. L.	Till Dec. Surgery L. After Dec. 1, Diseases of Nerv. Sys.	Obstetrics. L.	Obstetrics. R.	Venereal Diseases.	Museum.
3		Theo. and Prac. R.			Theo. and Prac. R.	
4	Therap. L.	Dermatol. L.		Clin. Con.	Therap. L.	
5	Otology.					

**SECOND TERM, 1875.**
**FIRST YEAR.**

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Laboratory.	Histology.	Laboratory.	Histology.	Laboratory.	Laboratory.
10	Chem. L.	Histology.	Laboratory.	Histology.	Chem. R.	Phys. R.
11	Laboratory.	Phys. Con.	Phys. L.	Laboratory.	Phys. L.	
1	Anat. L. till May.	Anat. L. or R. till May.	Laboratory.	Anat. L. till May.	Anat. R. till May.	
4			Histology.			
5	Prac. Anat. till May.	Prac. Anat. till May.	Prac. Anat. till May.	Prac. Anat. till May.	Prac. Anat. till May.	



## SECOND YEAR.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8			Clin. Con.	M. G. H. Med. Visit.		
9	M. G. H. Med. Visit.	City H. Med. Visit.	Surg. R.	Mat. Med.	City H.	Clin. Med.
10	Clin. Med.	City H. Surg. Con.	M. G. H. Surg. Visit.	Aus. & Per.	City H. Surg. Visit.	M. G. H. Surg. Visit.
11	Path. Anat. L.		M. G. H. Op.	Path. Anat. L.	City H. Op.	M. G. H. Op.
12		Chem. L.	Chem. R.			
3	Path. Mic.	Path. Anat. R.		Path. Mic.	Path. Anat. R.	

## THIRD YEAR.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8		After April City H.	Clin. Con.	M. G. H. Med. Visits.	Otology after May 1.	Diseases of Children.
9	Eye and Ear Infirmary. M. G. H. Med. Visit.	City H. Med. Visit.	Clinical Dermatology.	Diseases of Nervous Sys.	City H. Oph and Otology. Eye and Ear Infirmary.	Clin. Med.
10	Clin. Med.	City H. Surg. Con.	M. G. H. Surg. Visit.	Oph. L.	City H. Surg. Visit.	M. G. H. Surg. Visit.
11			M. G. H. Op.	Clin. Surg.	City H. Op.	M. G. H. Op.
12	Till April 1, Surgery L. After Ap. 1, Diseases of Women.	Th. & Pr. L.	Obst. L.	Th. & Pr. L.		
1			Till May 1, Ment. Dis.			
3	Th. & Pr. R.		Th. & Pr. R.			
4	Obst. R.	Dermatology L.	Therap. L.	Otology after May 1.	Therap. L.	Venereal Diseases after Ap. 10.

## CLINICAL ADVANTAGES.

The Medical Department of the University is established in Boston, in order to secure those advantages for Clinical Instruction and for the study of Practical Anatomy which are found only in large cities.

There are Hospital visits or operations daily.

*The Massachusetts General Hospital.* — During the past year 1,700 patients were treated in the wards, and 15,612 in the out-patient departments. Patients are received from all parts of the United States and the Provinces, and are visited by the students with the attending physicians and surgeons. The opportunities for becoming acquainted with general surgery are very great. Operations are numerous, and are performed in the amphitheatre, which is provided with seats for 400 persons. Clinics in the following special branches have recently been established in connection with the out-patient department: Dermatology, Laryngoscopy, Electro-therapeutics.

The Hospital is adjacent to the Medical College, and its wards are open to the students on four days in the week.

*The City Hospital.* — During the past year 3,662 cases were treated in its wards, and 8,732 in its various out-patient departments. The number of accidents was 756. The Medical wards always contain many cases of acute diseases, and changes are taking place constantly. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds, are excellent, since, on an average, 800 street accidents are yearly treated. Surgical operations are performed in the amphitheatre. These include general surgical and also ophthalmic operations. Diseases of the eye, the ear, and the skin are largely treated in the out-patient department. Clinical instruction is given by the physicians and surgeons twice a week.

In these two Hospitals the facilities for witnessing Operative Surgery are unsurpassed. Twice a week in the first term, and three times a week in the second term, operations are performed in the presence of the class. The number of these operations is large, reaching nearly *two thousand* a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

*The Massachusetts Charitable Eye and Ear Infirmary.* — The seven thousand patients annually treated at this institution present every variety of disease of the eye and ear, and supply a large number of operations.

*The Marine Hospital at Chelsea* receives from the shipping of the port a large number of patients who furnish examples of the diseases of foreign countries, and of distant parts of the United States. Many cases of venereal disease in its various forms are treated annually.

*The Boston Dispensary.* — Thirty-six thousand patients were treated at this Public Charity during the past year. Students have excellent

opportunities to see minor surgery, and many of the diseases of children, and to practise auscultation and percussion.

*Hospital Appointments.* — From eighteen to twenty students are selected annually for House Officers of the various Hospitals. Appointments to the Boston Lying-in-Hospital are for a term of three months.

### EXAMINATIONS.

The regular examinations are held in the following order : —

*At the end of the first year :* Anatomy, Physiology, and General Chemistry.\*

*At the end of the second year :* Medical Chemistry, Materia Medica, and Pathological Anatomy.

*At the end of the third year :* Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

The regular examinations are held at the end of each year in June ; and a week before the opening of the School in September, on the studies of the preceding year.†

No student shall be allowed to anticipate the examinations in the regular course of studies of his year, except by special permission of the Faculty. No student shall be allowed to present himself for examination in any branch without notifying the Dean by letter that he intends to do so, one month before the time when the examination is to be held.

The examinations are conducted mainly in writing. The examination in Clinical Medicine is conducted in part at the bedside. For specimens of the latest examination-papers, see pp. 22-30. No student will receive his degree until he has passed a satisfactory examination in all the above-mentioned subjects, and presented a certificate from the Demonstrator of Anatomy that he has satisfactorily dissected the three parts of the body. Those who fail in any subject may present themselves in that subject again at the next regular examination. The regular examinations for the year 1875-76 will begin June 12th and September 25th. The February examination will be held on the 7th.

### DIVISION OF STUDENTS.

Students are divided into three classes, according to their time of study and proficiency.

Students may be admitted to advanced standing in the regular course, but all who apply for admission into the second or third year's class must pass an examination at the beginning of the year in the branches already pursued by the class to which they seek admission, and furnish a satis-

\* See foot-note on page 10.

† The June examination is for those only who are members of the School at the time, and for those applying for a degree.



factory \* certificate of time spent in medical studies. No student shall advance with his class, or be admitted to advanced standing, until he has passed the required examination in the studies of the year, or a majority of them; nor shall he become a member of the third class until he has passed all the examinations of the first in addition to a majority of those of the second year.

Students who do not intend to offer themselves for a degree will, however, be received at any part of the course for one term or more.

Any student may obtain, without an examination, a certificate of his period of connection with the School.

### REQUIREMENTS FOR A DEGREE.

Every candidate must be twenty-one years of age, and of good moral character; must give evidence of having studied medicine three full years; have spent at least one continuous year at this School; have presented a satisfactory thesis; and have passed the required examinations.

The degree of Master of Arts is open to graduates of the School, who are also Bachelors of Arts, and who pursue an approved course of study in Medicine for at least one year after taking the degree of Doctor of Medicine.

### LIBRARIES.

The library at the Medical College is open to the student on the deposit of five dollars, to be refunded to him when he may desire, after returning all books.

The College Library at Cambridge is open to the students of the Medical School.

The Boston Public Library, which contains a large collection of medical books, may also be used by students recommended by the Dean.

### BOYLSTON MEDICAL SOCIETY.

This society, composed of medical students, meets at stated intervals for the discussion of medical topics, and is presided over by a physician selected by the members. Prizes, in money or books, are awarded annually to the writers of essays judged worthy of such distinction by a committee of physicians selected for that purpose by the society.

### FEEES AND EXPENSES.

For matriculation, five dollars; for a year, two hundred dollars (if in two payments, at the first, one hundred and twenty dollars; at the

\* Certificates from teachers who practise any peculiar or exclusive system of medicine are not accepted.

second, eighty dollars); for one term alone, one hundred and twenty dollars; for graduation, thirty dollars. Of students who do not pay in advance, a bond for \$300, executed by two sufficient bondsmen, one of whom must be a citizen of Massachusetts, is required. A copy of such bond will be sent on application to the Secretary of the Faculty. To students depositing these bonds, term-bills will be presented a week before the end of the first term, to be paid within two weeks; and also one week or more before Commencement, to be paid on or before the beginning of the next academic year. Such students shall be held responsible for the payment of fees until they shall have notified the Dean of their intention to withdraw from the School, and have received their bond from the Treasurer. No degree can be conferred till all dues to the School are discharged. The student's expenses may be reduced, in accordance with his means, to the standard which prevails in other cities. The janitor of the Medical College will advise students in the selection of boarding places, and will always have a list of such as are in the vicinity of the college building, varying in their rate of charges.

#### PECUNIARY AID.

Four yearly scholarships have been established, of the value of \$200 each, open to meritorious students who have been at the School for one or two years. Only those needing assistance are expected to apply, and from such those holding the highest rank will have the preference.

Assistants to the Professors of Physiology and Chemistry are annually appointed from such deserving students as need aid. Students holding these positions are exempt from the payment of the fee for tuition during their term of service.

Students on joining the School must enter their names with the Secretary of the Faculty.

#### COURSE OF STUDY FOR GRADUATES.

For the purpose of affording to those who are already graduates in medicine additional facilities for pursuing clinical, laboratory, and other studies, for which they had not previously found leisure, in such subjects as may specially interest them, and as a substitute in part for the opportunities heretofore sought for in Europe, the Faculty have established a post-graduate course, of which the following is a programme:—

*Histology.*—The various methods of examining the different tissues are employed, and opportunities for original research are offered. Fee twenty dollars per term.

*Physiology.*—Opportunities for original investigation in the Physiological laboratory. Fee thirty dollars per term.

*Medical Chemistry.*—Practical instruction in the Chemical laboratory in the analysis of the urine and other animal fluids in health and disease, and of poisons; examination of blood-stains and other objects connected with medico-legal investigations, with the application of the microscope to these processes. General analysis also, if desired. Laboratory fee thirty dollars per term.

*Pathological Anatomy.*—Practical instruction in Pathological Histology and the examination of specimens in the Microscopical laboratory; and opportunity for witnessing and making autopsies. Fee twenty dollars per term.

*Surgery.*—A practical course of operative surgery and instruction in the application of bandages and apparatus. Fee twenty-five dollars per term.

*Auscultation, Percussion, and Laryngoscopy* practically taught, and diseases of the larynx demonstrated by the aid of the oxyhydrogen light. Fee twenty dollars per term.

*Ophthalmology.*—Clinical instruction, lectures on diseases of the eye, and demonstrations of the methods of performing operations. Exercises in the use of the ophthalmoscope. Fee twenty-five dollars per term.

*Otology.*—Lectures and clinical instruction on diseases of the ear. Fee fifteen dollars per term.

*Dermatology.*—Clinical instruction in diseases of the skin, illustrated by patients in this department of the Massachusetts General Hospital. Lectures. Fee twenty-five dollars per term.

*Syphilis.*—Clinical instruction at the Boston Dispensary and the Marine Hospital. (Second term.) Fee fifteen dollars.

*Psychological Medicine.*—Lectures on mental diseases. (Second term.) Fee five dollars.

*Diseases of the Nervous System.*—Practical illustrations of the application of various forms of electricity. Lectures. Fee fifteen dollars per term.

*Gynecology.*—Lectures on diseases of women. (Second term.) Fee ten dollars.

*Obstetrics.*—Cases supplied. A course of operative midwifery. Fee ten dollars.

Those pursuing this course may elect the studies to which they will give their attention, and allot the time they will devote to each. They will be exempt, unless at their option, from examinations, and may obtain a certificate of attendance on this course of advanced study. On payment of the full fee for the course, they will have the privilege of attending any of the other exercises of the Medical School, the use of its laboratories and library, and all other rights accorded by the University.

Graduates of other medical schools may obtain the degree of M.D. at


this University after a year's study in the graduates' course. The required examinations may be passed in such order as is desired, but only at the stated seasons.

The fee for a year is . . . . .	\$200
„ for one term . . . . .	120

For any of the special courses such fees as are above specified.

For further information or catalogues address

DR. R. H. FITZ, *Secretary*,  
108 Boylston Street, Boston, Mass.

 The Medical College is on North Grove Street, Boston.

# EXAMINATIONS IN THE MEDICAL SCHOOL.

## FIRST AND SECOND YEARS.\*

—◆—  
First Year's Studies.

ANATOMY. — PROF. HOLMES.

Describe the following parts : —

1. The epithelium of the mouth, the intestine, the trachea, the bladder.
2. The muscular fibres of the œsophagus.
3. Nerve-fibres and nerve-cells.
4. The ilio-pectineal line ; pectineal eminence ; spine of pubes ; crest of pubes ; angle of pubes.
5. The internal ligaments of the hip and knee-joints.
6. The scaleni muscles.
7. The psoas magnus.
8. The thyroid axis.
9. The internal mammary artery.
10. The superficial veins of the lower extremity.
11. The vasa brevia.
12. The lymphatic glands about the groin and the saphenous opening
13. The subarachnoid cavity.
14. The lateral ventricles of the brain.
15. The structure of the retina.
16. The *ossicula auditus* and their connections.
17. The duodenum and its relations.
18. The ileo-cæcal valve.
19. The uterus and its annexes (appendages).
20. The Fallopian tube.

—————  
PHYSIOLOGY. — ASST. PROF. BOWDITCH.

1. Why is it undesirable, even if possible, to live exclusively on either animal or vegetable food ?
2. How is food prevented from entering the trachea in deglutition ?
3. What is the cause of the acidity of the gastric juice, and why are the walls of the stomach not digested by it ?
4. What is the function of the bile as a digestive fluid ?
5. What is the origin of the gases found in the intestines ?
6. Describe the process of absorption in the intestines, and illustrate it by a diagram of an intestinal villus.

\* Examination papers of the Third Year may be found in the last Catalogue, or may be expected in the next.



7. Describe the coagulation of the blood and the conditions which favor the process.
  8. Describe the innervation of the heart.
  9. What is the origin of urea, and by what organs is it eliminated.
  10. Explain the vocal and respiratory functions of the larynx.
  11. Explain the various ways in which the body loses heat.
  12. What is the difference between a secretion and an excretion? Give examples.
  13. Explain the mechanism (nervous and muscular) of respiration.
  14. What is the origin and destination of the glycogen of the liver?
  15. What is the cause of cadaveric rigidity?
  16. How does the eye enable us to estimate distances?
  17. What is the function of the tubercula quadrigemina?
  18. What nerve centres lie in the lumbar region of the spinal cord?
  19. Describe the formation of the umbilical vesicle.
  20. Why are the anterior extremities of the fœtus relatively more developed than the posterior ones?
- 

#### GENERAL CHEMISTRY. — ASST. PROF. WOOD.

[In addition to the following questions, a written report of the analysis of a solution containing inorganic substances was required.]

1. Describe the preparation and properties of  $\text{CO}_2$ ,  $\text{N}_2\text{O}$ ,  $\text{NO}$ ,  $\text{H-O-NO}_2$ ,  $\text{KI}$ .
2. What is the action of water on lead? What substances modify this action, and how?
3. What are the principal ores of zinc? How are they reduced? Properties and uses of the metal?
4. Give the tests for phosphoric and arsenic acids, and state how the former can be detected in the presence of the latter.
5. What is the action when the hydrates of  $(\text{Al}_2)$ ,  $(\text{Cr}_2)$ , and  $(\text{Fe}_2)$  are fused with a mixture of  $\text{Na}_2 = \text{O}_2 = \text{CO} + \text{K} - \text{O} - \text{NO}_2$ ?
6. What are the characteristic tests for salts of  $\text{K}$ ,  $\text{Na}$ , and  $\text{NH}_4$ ?
7. What is haemoglobin? Describe its properties and tests. How can it be detected when in solution, or as a stain upon clothing?
8. Define the following terms: alcohol, fat acid, compound ether, glycol, amine, amide. Give an example of each.
9. Describe the process of manufacture and purification, and the properties of ether.
10. Write the reactions of strong nitric acid on cotton, glycerine, and benzole. Describe the properties of the compounds thus formed.
11. Describe the methods of preparing aniline from benzole. What is the composition of aniline, and what are its properties, uses, and tests?
12. How can the amount of alcohol in fermented liquors be determined?

## Second Year's Studies.

## MEDICAL CHEMISTRY. — ASST. PROF. WOOD.

[In addition to the following questions, a written report of the analysis of a specimen of urine, and of a mixed organic and inorganic poison, was required.]

1. Describe the physical properties of the urine. What changes may they undergo normally and pathologically?
2. What is the average daily amount of chlorides in the urine? What does a diminution in the amount signify, and how may it be detected? Give the process for determining the exact amount?
3. Mention the changes which take place in the urine during the progress of a case of pneumonia.
4. What abnormal pigments may be present in the urine? To what may they be due, and how may they be detected?
5. What may be the sources of pus in the urine? How may the source be determined?
6. How distinguish between amorphous phosphates and amorphous urates in a urinary sediment?
7. What is the so-called "brick-dust" sediment, and to what is it due?
8. What are the symptoms and post-mortem appearances in a case of oxalic acid poisoning? How may it be detected in the contents of the stomach?
9. How can you diagnosticate with certainty a case of chronic poisoning by tartar emetic?
10. Describe a case of chronic lead poisoning. How can the lead be detected in the urine?
11. What is the fatal dose and fatal period in strychnia poisoning?
12. What are the symptoms of belladonna poisoning, and the tests for atropia?

## MATERIA MEDICA. — INSTRUCTOR MARKOE.

1. Name five of the most important varieties of starch. Which sort is most prized for dietetic use? By what means would you detect the substitution of an inferior variety for it? Why is starch incapable of sustaining life in the absence of other food?
2. By what authority is the "United States Pharmacopœia" issued? What is the distinction between a Pharmacopœia and a Dispensatory? What do you understand by the terms Official and Unofficial as applied to medicines?
3. From what source is Iodine obtained? Give the full Latin official name of two preparations of Iodine suitable for internal administration, stating the dose of each.
4. Mention the uses and doses of: Potassii Bicarbas, Liqueur Potassæ, Potassii Citras, Potassii Chloras, Potassii Permanganas.
5. Sodii Phosphas, Liqueur Sodæ Chlorinatæ, Ammonii Chloridum Purificatum, Liqueur Ammonii Acetatis.
6. Spiritus Ammoniaë Aromaticus, Potassii Iodidum, Potassii Bromidum, Hydrargyrum Iodidum Rubrum.

7. Hydrargyrum Chloridum Mite, Hydrargyrum cum Creta, Hydrargyrum Chloridum Corrosivum, Liquor Potassii Arsenitis.

8. Antimonii et Potassii Tartras, Bismuthi Subnitrates, Ferri Sulphas, Ferrum Redactum.

9. Liquor Ferri Subsulphatis, Ferri et Quiniæ Citras, Tinctura Ferri Chloridi, Zinci Sulphas, Zinci Oxidum.

10. By what tests would you know a sample of Ether to be clean and strong enough for use as an anæsthetic?

11. How is Chloral Hydrate made? In what way do alkalies effect its decomposition? In what doses is it usually given?

Mention the origin, active principles, most important preparations, and doses of 12. Belladonna; 13. Ergot; 14. Veratrum Viride; 15. Senna. 16. Valerian; 17. Buchu; 18. Digitalis; 19. Colchicum; 20. Nux Vomica; 21. Cinchona; 22. Prunus Virginiana; 23. Opium.

24. What do you understand by the class of officinal preparations called Aquæ? Mention five examples of the officinal waters, giving the full Latin names.

25. What is the difference between an Infusion and a Decoction?

26. What are Tinctures, Spirits, and Fluid Extracts?

27. What do you understand by an Inspissated Extract, by an Aqueous Extract, by an Alcoholic Extract? Give an example of each kind.

28. What is a Cerate? What is an Ointment? Why should yellow wax be used in place of white wax as an ingredient in cerates and ointments?

29. What drugs enter into the composition of Extractum Colocynthis Compositum, of Pilulæ Catharticæ Compositæ, of Pilulæ Rhei Compositæ, and of Pulvis Aromaticus?

30. In the following prescriptions you are to point out the errors or the incompatibilities:—

℞	Sodii Boratis	3j
	Aquæ Rosæ	f3ij.
	Syrupi Acaciæ	f3ij.
	Misce.	

℞	Magnesiæ Sulphatis	3j.
	Sodii Carbonatis	3ss.
	Syrupi Acidi Citrici	f3j.
	Aquæ Acidi Carbonici	f3vj.
	Misce.	

Sig. To be taken at a draught.

℞	Syrupi Scillæ	f3ij.
	Vini Ipecacuanhæ	f3ij.
	Tinct. Opii	f3iv.
	Syrupi Acaciæ	f3ss.
	Misce.	

Sig. Dose: One teaspoonful every three hours.

℞	Tinct. Ferri Chloridi	f3ss.
	Syrupi Auranti Corti	f3ij.
	Spt. Ammoniæ Aromat.	f3j.
	Misce.	



## PATHOLOGICAL ANATOMY. — Asst. Prof. Fitz.

1. What is a sequestrum ?
2. Explain the method of formation of a gangrenous bleb.
3. What do you understand by the term hyaline degeneration of muscular fibre ?
4. What are corpora amylacea, and where may they occur ?
5. What distinction is made between calcification and ossification ?
6. The appearances and supposed method of origin of the hematoma of the dura mater.
7. What are the usual seats of miliary aneurisms in the brain ?
8. Name the more common forms of cerebral tumors.
9. In what parts of the heart are thrombi most likely to form ?
10. What alterations of the heart follow embolism of the coronary artery ?
11. What appearances would suggest that a fatty heart might be the result of anæmia ?
12. Give the appearances of aortic endocarditis producing stenosis.
13. How would you recognize brown induration of the lungs ?
14. What anatomical changes in the lungs may bronchial dilatation be associated with ?
15. What is interstitial pneumonia ?
16. How does post-mortem softening of the stomach occur ?
17. In what parts of the alimentary canal is the perforating ulcer found ?
18. What changes in the liver produce an increased density of this organ ?
19. How may abscesses of the kidney arise ?
20. What may be the causes and results of chronic cystitis ?

## Third Year's Studies.

## THERAPEUTICS.—PROF. EDGS.

1 Classification, *modus operandi*, doses and uses of the most important cathartics.

2. Same for disinfectants and antiseptics.

Describe, according to letters of schedule, the following drugs. A., absorption; E., elimination; S.s., symptoms of small dose; S.l., symptoms of large dose; S.c., symptoms of continued dose; P., poisoning; Path., pathological appearances; Phys., physiological experiments; Th., theory of action and basis for the theory; Therap., therapeutic applications; Prep., preparations, methods of administration and doses; Pres., prescriptions.

3. Iodide of Potassium. A. E. S.c. Th. Therap. Prep.
4. Opium. A. S.s. S.l. P. Path. Th. Therap.
5. Quinia Sulphate. A. E. S.l. Phys. Th. Therap. Pres.
6. Chloral Hydrate. E. S.s. S.l. Th. Therap. Pres.
7. { Phosphorus. S.s. P. Path. Therap. Prep.
- { Arsenic. A. E. P. Therap.
8. { Digitalis. S.s. S.l. Th. Therap. Prep.
- { Aconite. S.s. S.l. Th. Therap.
9. { Strychnia. P. Th. Therap.
- { Bromide of Potassium. S.l. Th. Therap.
10. { Cod Liver Oil. Th. Therap. Pres.
- { Cantharides. Th. Therap.

## OBSTETRICS.—INSTRUCTOR REYNOLDS.

1. Describe the "bulb of the vagina," its position and its anatomical structure.

2. How is the ovular decidua ("decidua reflexa") formed, and what changes does it undergo as pregnancy advances?

3. What are the marks by which the examining hand distinguishes during labor one of the frontal bones from the occipital?

4. If a primipara be fully examined twelve months after delivery, what evidence of a preceding pregnancy may be expected?

5. A woman is in labor, dilatation is two-thirds completed, the membranes have given way, the head is well down in the excavation; near the centre of that part of the head which can be touched is felt a diamond-shaped fontanelle with four radiating sutures; no portion of the occipital bone is within reach. What peculiarity is there in the position of the head? By what mechanism is the head likely to be expelled?

6. Recount the mechanism by which expulsion of the head is effected in face presentation (second position, posterior variety), beginning with the alterations which the first contractions of the uterus produce?

7. What symptoms in the progress of a labor make it probable that a rupture of the uterus has occurred?

8. What mechanical obstacles to the extraction of the child does the performance of version by the feet commonly produce? Describe the methods by which these difficulties are to be relieved.

9. What is meant by the abdominal variety of extra-uterine pregnancy? How does this variety differ in duration, modes of termination, and degree of danger, from the other forms of that accident?

10. State the differential diagnosis between a "cephalæmatoma" and the ordinary caput succedaneum. In cephalæmatoma what is the lesion?

### CLINICAL MEDICINE.—PROF. ELLIS.

1. How will you distinguish the convulsions of infancy, of the puerperal state, and those connected with disease of the kidneys, from epilepsy?

2. How do the movements of locomotor ataxia differ from those of chorea?

3. What peculiarities in the delirium of typhoid fever would influence you in your prognosis?

4. State the character of the lesions in infantile paralysis, the prognosis and the treatment.

5. What is the significance of the sub-crepitant râle? State its causes and dangers.

6. What do you understand by capillary bronchitis?

7. How will you distinguish croupous from catarrhal pneumonia, clinically?

8. What are the diagnostic signs of pneumo-thorax?

9. What are the symptoms of emphysema of the lung?

10. How does pneumonia in the child differ from that in the adult?

11. How will you distinguish chronic gastric catarrh from dyspepsia?

12. How will you treat a case of chronic ulcer of the stomach?

13. What are the causes of vomiting?

14. What are the causes of jaundice?

15. Give the symptoms and treatment of enteritis.

16. How would you treat a case of typhoid fever?

17. State the anatomy and treatment of lupus.

18. Describe psoriasis and its treatment.

19. What are the symptoms of pelvic cellulitis? How would you treat it?

20. What is flexion of the uterus? How would you treat it?

### THEORY AND PRACTICE.—PROF. MINOT

1. What reasons are there for supposing tuberculosis to be a contagious disease?

2. What are the principal elements of prognosis in pulmonary consumption?

3. What are the most characteristic symptoms of tubercular meningitis?

4. With what diseases may tubercular meningitis be confounded?

5. What are the chief sources of danger in acute pleurisy?

6. What is the best treatment in simple acute pneumonia; and under what circumstances is the treatment likely to be modified?

7. What is the best treatment for empyema?

8. What are the elements of diagnosis between capillary bronchitis, pneumonia, and pleurisy, in a child of five years?

9. Describe the range of temperature in an ordinary case of typhoid fever.

10. What are the principal affections of the intestinal canal involving obstruction?

11. What are the symptoms of lead poisoning?

12. What is known of the etiology of typhoid fever?

13. What is apoplexy?

14. What is the treatment of peritonitis?

15. What are the symptoms of acute pulmonary tuberculosis?

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### SURGERY. — PROF. BIGELOW.

1. Retention of Urine, its causes and treatment.

2. Erysipelas.

3. Ulcers, their varieties and treatment.

4. Fistula in ano.

5. Boil and Carbuncle.

6. Piles.

7. Diagnosis of Strangulated Hernia.

8. Cleft Palate and its best treatment.

9. Hydrocele and its treatment.

10. Enumerate the secondary symptoms of Syphilis.

11. Treatment of Syphilis.

12. Chilblains and their treatment.

13. Diagnosis of Stone.

14. Operations for Stone.

15. Cataract, and the operations for it.

16. Regular Dislocations of the Hip, and the principle of their reduction.

17. Impacted Fracture of the Neck of the Femur.

18. Surgical Anatomy and Ligature of the common Carotid.

19. Weeping Sinew and Ganglion.

20. Lateral Curvature of the Spine.







